

MANTHEY, Tadeusz

Comparative model studies on filling navigation locks through
hook gates and the bottom culvert. Rozpr hydrotechn no. 14 :
55-74 '63.

MANTHEY, Tadeusz, dr inz.

Maritime topics at the 10th Congress of the International
Association for Hydraulic Research. Tech gosp morska 14 no.2:
52-54 F '64.

1. Instytut Budownictwa Wodnego, Polska Akademia Nauk, Gdansk.

MANTHEY, Tadeusz, dr inz.

Model studies on sluice charging through lock gates and through
sluice channels. Gosp wodna 23 no.7:254-257 J1 '63.

1. Instytut Budownictwa Wodnego, Polska Akademia Nauk, Gdansk.

MANTHEY, Tadeusz, dr inz.

Research on filtration through an earth-filled cofferdam
performed on a ground model. Gosp wodna 23 no.7:279-280
Jl '63.

MANTHEY, Tadeusz

The Inland Hydraulic Engineering Department, Institute of Hydraulic Engineering of the Polish Academy of Sciences during the years 1953-1963. Rozpr hydrotechn. no. 14:24 38 1964.

Studies on the conditions for letting the flows pass over a weir gate. Ibid.:115-141

MAJEWSKI, Wojciech, mgr inz.; MANTHEY, Tadeusz, dr inz.

Tenth Congress of the International Hydraulic Research Association,
London, September 1-5, 1963. Gosp wodna 24 no. 5:182-183 My '64.

1. Institute of Hydraulic Engineering, Polish Academy of Sciences,
Gdansk.

MANTHEY, Tadeusz

Bogic Knezevic; obituary. Archiw hydrotech 11 no. 7: 255-256 '64.

MANTHEY, Tadusz de 1220

Research on utilization of ground water in the area of the
on a ground model. Chap. 1220. 1220-1221.

5(4)

AUTHORS: Alchudzhan, A. A. Mantikyan, M. A. SOV/76-33-4-5/32

TITLE: Investigation of Mixed Adsorption Catalysts for Hydrogenation (Issledovaniye smeshannykh adsorptsionnykh katalizatorov gidrirovaniya).
I, Pd-Ag Catalysts on Silica Gel (I, Pd - Ag-katalizatory na silikagele)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 780 - 789 (USSR)

ABSTRACT: If Ag, Cu, and Au, in analogy to hydrogen, are introduced into palladium they destroy its paramagnetism. Therefore it was assumed that this is also bound to lead to a destruction of the catalytic activity of Pd in benzene hydrogenation (Ref 2) which was partly confirmed (except for Au) (Ref 3). The strong influence exercised by hydrogen on the activity of palladium sponge (in the case of Pd-black very low influence) (Ref 4) led to the assumption that benzene hydrogenation takes place at different active places of Pd. For this reason the influence exercised by Au, Ag, and Cu on the Pd-adsorption catalysts in benzene hydrogenation was investigated in the present case. The activity of the catalyst (C) was determined

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Investigation of Mixed Adsorption Catalysts for SOV/76-33-4-5/32
Hydrogenation. I. Pd-Ag Catalysts on Silica Gel

from the rate of benzene hydrogenation. Silica gel (SC) the surface of which was determined by Ye. V. Khrapova at the laboratoriya adsorptsii prof. A. V. Kiselev v MGU (Laboratory for Adsorption, Professor A. V. Kiselev at the MSU) was used as catalyst carrier. Pd-Ag adsorption catalysts (and for the purpose of comparison also pure Pd-(K)) which were produced according to the method of a simultaneous palladium-"ammoniate"-and silver adsorption were investigated. The (C) contained 1.0, 0.2 and 0.1% Pd of the weight of (SC) while the ratio Pd: Ag was varied from 49:1 to 1:9 at a degree of surface filling of (SC) within the limits of from 0.00087 to 0.0909. It was observed that with increasing Ag-content the activity of (C) increases to a maximum and then decreases. This effect of Ag depends on the degree of filling of the (SC)-surface. Under the conditions investigated benzene hydrogenation with respect to benzene and hydrogen takes place as reaction of the zero order with the apparent activation energy of benzene hydrogenation being practically

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Investigation of Mixed Adsorption Catalysts for SOV/76-33-4-5/32
Hydrogenation. I, Pd-Ag Catalysts on Silica Gel

equal for all (C) investigated. It is assumed that the effect of Ag on the Pd-SiO₂ (K) consists in the change of the active catalyst surface. The function of the rate of benzene hydrogenation as dependent on the contact time and the ratio H₂ : C₆H₆ (Tables 2,3) are tabulated. There are 3 figures, 4 tables, and 15 references, 13 of which are Soviet.

ASSOCIATION: Yerevanskiy politekhnicheskiy institut im. K. Marksa
(Yerevan Polytechnic Institute imeni K. Marx)

SUBMITTED: September 19, 1957

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5 (4)

AUTHORS:

Alchudzhan, A. A., Mantikyan, M. A.

SOV/76-33-8-3/39

TITLE:

Investigation of Mixed Hydrogenating Adsorption Catalysts.
II, Activity of Mixed Pd-Ag Catalysts Adsorbed on SiO_2 as a
Function of the Order of Adsorption of Pd and Ag

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 8, pp 1691-1694 (USSR)

ABSTRACT:

In a previous paper (Ref 1) it was stated that at the transition of Pt- SiO_2 catalysts (C) into Pd + Ag + SiO_2 (C) the same dependence of the reaction velocity on the hydrogen and benzene concentrations in the hydrogenation of benzene, as well as the same apparent activation energy, remain preserved. It was therefore assumed that Ag can effect a change in the size of the active surface without changing its energetic state. For this reason, the order of application of Pd and Ag, respectively, on SiO_2 was studied in the present case. The (C) were produced as in (Ref 1) and examined at the benzene hydrogenation by the same working technique. The (C) obtained by an adsorption (A) and subsequent reduction of palladium salt and then silver salt proved completely inactive. In the course of this investigation, (C) were studied the Pd-content of which was 1.0 % of the SiO_2 -weight and

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Investigation of Mixed Hydrogenating Adsorption Catalysts. II. Activity of Mixed Pd-Ag Catalysts Adsorbed on SiO_2 as a Function of the Order of Adsorption of Pd and Ag

SCV/76-33-8-3/39

which contained a Pd : Ag ratio of 4:1, and (C) with 0.2 % Pd and Pd : Ag = 32:1, 4:1, and 2:1. (C), in which the Ag-salt was adsorbed and reduced before the Pd-salt, exhibited an (A) analogous to that observed at a joint (A) of Pd and Ag on SiO_2 , which means that as the Ag-content increases in case of a constant Pd-content, the (A) of (C) increases to a maximum and then falls (Table). The absence of an activity in the first-mentioned experiments is traced back to the deactivating effect of a higher Ag-concentration on Pd. There are 1 figure, 1 table and 2 Soviet references.

ASSOCIATION: Yerevanskiy politekhnicheskiy institut im. K. Marksa (Yerevan Polytechnic Institute imeni K. Marx)

SUBMITTED: August 1, 1957

Card 2/2

S/171/60/013/005/001/001
E142/E235

AUTHORS:

Alchudzhan, A. A. and Mantikyan, M. A.

TITLE:

Investigations on Mixed Adsorption Hydrogenation
Catalysts: Part V: Investigations on Mixed Pd - Pt
Catalysts on Silicagel

PERIODICAL:

Izvestiya Akademii nauk Armyanskoy SSR, Khimicheskiye
nauki, 1960, Vol. 13, No. 5, pp. 307-314

TEXT:

The catalytic activity of mixed Pd - Pt adsorption catalysts as well as of Pd - SiO₂ catalysts was tested by ascertaining the degree of hydrogenation of benzene to cyclohexane. The apparatus, starting materials, carrier and preparation of the catalysts, by simultaneous and subsequent adsorption of palladium and platinum onto silicagel, were similar to those described by A. A. Alchudzhan and M. A. Mantikyan (Ref. 15). The Pd + Pt - SiO₂ catalysts, containing varying quantities of Pd and Pt, were prepared by washing 10 g chemically pure Pd-chloride repeatedly with distilled water, dissolving it in 1 litre of water and acidifying the solution with hydrochloric acid (to prevent hydrolysis). The concentration of palladium in the palladium chloride solution

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S/171/60/013/005/001/001
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Investigations on Mixed Adsorption Hydrogenation Catalysts: Part
V: Investigations on Mixed Pd - Pt Catalysts on Silicagel

was determined gravimetrically; the titre of the solution was $T_{Pd} = 0.00570$ g/ml. The titre of the chloroplatinic acid, $T_{Pt} = 0.004556$ g/ml; the acid itself was prepared by the method described by A. A. Alchudzhan and M. A. Indzhikyan (Ref. 19). The activity of the Pd - SiO_2 , Pt - SiO_2 , and Pd+Pt- SiO_2 -catalysts was tested under identical conditions, by hydrogenating benzene at a temperature of $175^\circ C$, when the ratio of $H_2 : C_6H_6 = 4 : 1$ and the rate of the hydrogen current was $V_{H_2} = 2.04$ litre/hour. The total pressure of hydrogen, benzene vapours and cyclohexane was 680 mm. In every test the catalysts contained the same quantity of palladium and platinum, i.e. $Pd + Pt = 6.15 \times 10^{-5}$ g.at. and they contained the two elements in the following ratios: 10:1; 3:1; 2:1; 1:1; 1:2. In this case palladium and platinum were applied simultaneously onto the silicagel. Two samples, containing the ratio $Pd:Pt = 2:1$, prepared by subsequent application of Pd and Pt - and vice versa, were also tested, as well as 3 samples of Pd- SiO_2 -catalysts and 3 samples of Pt- SiO_2 -catalysts, containing varying quantities of palladium and

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Investigations on Mixed Adsorption Hydrogenation Catalysts: Part
V: Investigations on Mixed Pd - Pt Catalysts on Silicagel

platinum. Each time the weighed portions of the catalysts were taken in relation to 3 g of silica gel. Both components were found to act as catalysts during the hydrogenation of benzene. The surface of the silica gel was covered to a degree within the limits 0.000634 and 0.001950. It was observed that the catalytic activity decreased on increasing the Pt-content in the Pd+Pt-SiO₂ catalysts and, after reaching a minimum, it increased when the concentration of the platinum was relatively high. The catalytic activity of the Pd-SiO₂ catalysts decreased in relation to the degree of hydrogenation of benzene by the catalytically active platinum. The largest decrease in activity occurred when the ratio of Pd:Pt = 2:1. The authors suggest that, at such small ratios of the two elements, intermetallic compounds are formed which possess negligible catalytic activity. The formation of the Pd-Pt-phase is hampered when the ratio of the two elements is 2:1, at subsequent application of palladium and platinum onto the carrier; the catalysts show, therefore, a very high degree of activity. At simultaneous appli-

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S/171/60/013/005/001/001

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Investigations on Mixed Adsorption Hydrogenation Catalysts: Part
V: Investigations on Mixed Pd - Pt Catalysts on Silicagel

cation of the two elements onto the carrier the catalytic activity
decreases more sharply than in Pt-Pd-catalysts without a carrier.
Acknowledgments are expressed to the students A. Akopyan and
S. Gukasyan for their assistance. There are 2 tables, 1 figure and
19 references: 13 Soviet and 6 non-Soviet. ✓

ASSOCIATION: Yerevanskiy politekhnicheskiy institut imeni K. Marksa,
Kafedra obshchey i analiticheskoy khimii
(Department of General and Analytical Chemistry,
Yerevan Polytechnical Institute imeni K. Marx.)

SUBMITTED: July 7, 1960

Card 4/4

ALCHUDZHAN, A.A.; MANTIKYAN, M.A.; AYKAZYAN, A.M.

Mixed adsorption catalysts of dehydrogenation. Report No.1:
Pd/SiO₂ as a catalyst of cyclohexane dehydrogenation. Izv.AN
Arm.SSR. Khim.nauki 16 no.4:303-314 '63.

Mixed adsorption catalysts of dehydrogenation. Report No.2:
Pd-Ag/SiO as a catalyst of cyclohexane dehydrogenation. 315-325
(MIRA 16:9)

1. Yerevanskiy politekhnicheskiy institut imeni Karla Marksa,
kafedra obshchey i analiticheskoy khimii.

ALSHUDZHAN, A.A.; MANTIKYAN, M.A.; AYKAZYAN, A.M.

Mixed adsorption catalysts of dehydrogenation. Part 3: Pd-Au/SiO₂
as a catalyst for cyclohexane dehydrogenation. Izv. AN Arm.SSR.Khim.
nauki 17 no.4:368-374 '64. (MIRA 18:6)

1. Yerevanskiy politekhnicheskiy institut im. K.Marksa, kafedra
obshchey i analiticheskoy khimii.

ALCHUDZHAN, A.A.; MANTIKYAN, M.A.; AKHVERDYAN, M.M.

Mixed adsorption hydrogenation catalysts. Part 6; Mixed
Pd-Ni catalysts on silica gel. Izv. AN Arm. SSR. Khim.
nauki 18 no.3:244-247 '65. (MIRA 18:11)

1. Yerevanskiy politekhnicheskii institut imeni Karla Marksa,
kafedra obshchey i analiticheskoy khimii. Submitted June 6,
1964.

MANTO, A. M.

Information and publishing activity of the Central Wood-Chemical
Scientific Research Institute. Sbor.trud. TSNILKHI no.12:189-194
'57. (MIRA 13:10)

(Wood--Chemistry)

TERLO, G.Ya.; BASOVA, L.S.; Prinimali uchastiye: MANTO, Ya.B.; KOROLEVA, N.S.

Polyurethan coating based on hydroxyl-containing linear high
polymers. Lakokras.mat.1 ikh prim. no.1:8-11 '62. (MIRA 15:4)
(Protective coatings) (Urethans) (Polymers)

TERLO, G.Ya., inzh.; MANTO, Ye.B., inzh.

Phosphate undercoats and their use in shipbuilding. Sudostroenie
28 nc.2:47-49 F '62. (MIRA 15:3)
(Ships--Corrosion) (Phosphate coating)

TERLO, G.Ya.; IZRAL'YANTS, Ye.D.; MANTO, Ye.B.; PLATOVA, T.F.

Selecting efficient formulas for antifouling paints with long
action. Lakokras. mat. i ikh prim. no.5:6-10 '63.
(MIRA 16:11)

BIRCA-GALATEANU, D.; DEMETRESCU, Catalina; ELIAN, M.; MANTOIU, Lucia

The infrared spectra of some substituted hydrazides derived from
furylacrylic acid. Studii cerc chim 11 no.2:225-237 '63.

1. Institutul Politehnic, Bucuresti.

L 23452-66 EWT(m)/EWA(d)/EWP(t) IJP(c) JN/HW

ACC NR: AP6009709

SOURCE CODE: UR/0064/65/000/003/0070/0073

61

AUTHOR: Poluboyartseva, L. A.; Reyfer, A. A.; Mantorova, T. M.; Volikova, I. G.; Istrina, Z. F.

58

13

ORG: [Mantorova] UNIKhim); [Istrina] NIikhimash

TITLE: Corrosion resistance of materials for equipment in the production of sodium sulfide

27

SOURCE: Khimicheskaya promyshlennost', no. 3, 1966, 70-73

TOPIC TAGS: corrosion resistance, corrosion rate, chromium steel, sodium sulfide steel

ABSTRACT: The paper deals with the study and selection of corrosion-resistant materials as well as the determination of applicability limits of carbon steels for use in the manufacture of sodium sulfide. Both plant and laboratory tests were performed on samples of St.3 steel, Sch-28 cast iron, 1Kh18N10T and Kh17N13M2T chromium-nickel steels, Kh25, Kh25N4T, Kh28, Kh28NA, 3Kh13, and Kh17 high-chromium steels, OKh21N6M2T, and 1Kh21N5T low-carbon steels, Kh17G9AN4, Kh17N13M2T, and Kh14G14N3T manganese steels, as well as VT-1 technical-grade titanium, zinc, nickel (98% Ni) and pure (99.6 -- 98.6%) chromium. The compositions of the above steels are presented in tabular form. Both welded and unwelded test specimens were used, measuring 80x25x10 mm, and 40x20x3 mm, respectively. The tests conducted at the sodium sulfide

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UDC: 661.249.21:66.018.183

L 23452-66

ACC NR: AP6009709

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shop of the Shchelkovo Chemical Plant have shown that all the steels were corrosion resistant, meeting GOST 5272-51 specifications, with a corrosion rate of less than 0.1 g/(m².hr), and a 0.3 to 0.7 g/(m².hr) corrosion rate for the carbon steel. All chromium-nickel and high-chromium steels were shown to have high, medium, and low corrosion resistance depending on the specific usage designation. The steels were tested in sodium sulfide solutions whose concentrations ranged from 5--65% under varying conditions of temperature and test duration, in both stationary and agitation conditions. The results are presented in tabular form. In conclusion, the authors find that high-chromium steels have the highest corrosion resistance in sodium sulfide solutions. Both the decrease of chromium and the increase of nickel or manganese are shown to have an adverse effect on the anti-corrosion properties of steel. The steels are listed in descending order with respect to degree of corrosion resistance as follows: Kh28, Kh28Na, Kh25T, Kh25N4T, OKh21N5T, lKh21N5T, OKh21N6M2T, lKh18N10T, Kh17N13M2T, Kh17G9AN, Kh14G14N3T, Kh17, Kh13, St. 3. Orig. art. has: 1 figure, 6 tables.

[LD]

SUB CODE: 11,13/

SUBM DATE: none/

ORIG REF: 005/

OTH REF: 002

Card 2/2 dda

P/021/60/000/010/005/006
A105/A026

AUTHOR: Mantorski, Kazimierz, Master of Engineering
TITLE: Thermoelectricity in the Production of Graphite Electrodes
PERIODICAL: Przegląd Elektrotechniczny, 1960, No. 10, pp. 434 - 436

TEXT: The article reviews the problems encountered in Polish production of graphite electrodes for foundries. In the Zakład Elektrod Węglowych w Raciborzu (Ratiborz Electrode Plant) 2 types of calcining furnaces are in operation, i.e. gas-fired retort furnaces and electric furnaces. The crystallization of amorphous coal is done at temperatures over 2,300°C. Selection of raw materials, i.e. petroleum coke, pitch coke, etc., and the pressing influence on properties of graphite products are described. The graphitizing process is performed in Polish plants for the last 50 years in Acheson furnaces at 2,500 - 2,800°C temperatures. In the Raciborz Electrode Plant the calcination takes 70 hours at 7.5 kwh/kg as compared to 50 hours at 5 kwh/kg in Japan. The measuring of temperatures in the furnaces is done up to 1,500°C only and any effort for improvement failed. Because of the obsolete calcination method used in Poland the characteristics of transformers could not be determined. In the Raciborz Electrode Plant 4.2 mva transformers with a

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P/021/60/000/010/005/006

Thermoelectricity in the Production of Graphite Electrodes A105/A026

6 kv primary and 50 - 160 kv secondary voltage are used. To improve the obsolete methods in production of electrodes a new method was suggested 5 years ago, but the tests were delayed because of lack of experience. At present the electrodes are cauterized in rolling furnaces and graphitized in Acheson furnaces. The new method provides cauterization and graphitizing in the same furnace by two transformers; the smaller one heats the furnace during 5 - 10 days of cauterization to 1,000°C and the big one heats subsequently the furnace to temperatures needed for the graphitization.

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MANTRON, M. I.

Measuring the coefficients of thermal expansion of some explosives. M. I. MANTRON. *J. Chem. Ind. (Moscow)* 6, 1688-8(1929). -Coeffs. of thermal expansion were detd. for T. N. T., dinitronaphthalene, picric acid, molten mixts. of picric acid-dinitronaphthalene and picric acid-naphthalene by means of a modified Dulong & Petit method. The quant. compn. of the above mixts. is not given. The method and results are described. These data do not appear in either the "International Crit. Tables." or Landolt-Börnstein's Phys. Chem. Tables.

ROBERT SCHLESS

MANTROV, M. I.

USSR/Electricity - Dielectrics
Breakdown

Jul 51

"The Elementary Theory of Thermal Breakdown of Solid Dielectrics," Docent M. I. Mantrov, Cand Tech Sci, Moscow Power Eng Inst imeni Molotov

"Elektrichestvo" No 7, pp 61-65

Gives the basic theory of thermal breakdown of solid dielectrics. The formulas obtained permit one to calc the min breakdown voltages for a dielec in thermal breakdown. Cites exptl data for asphalt. Submitted 17 Nov 50.

199T25

AUTHOR:

Mantrov, M. I., Candidate of Technical Sciences, Docent
SOV/105-59-6-15/28

TITLE:

Service Life of the Insulation of Electrical Machines Under
Thermal Aging (Srok sluzhby izolyatsii elektricheskikh mashin
pri teplovom starenii)

PERIODICAL:

Elektrichestvo, 1959, Nr 6, pp 68-71 (USSR)

ABSTRACT:

Experiments show (Refs 1, 2, 3, 4, 5, 6, 7) that the process of thermal aging of cotton fabric, lacquer coatings and of different kinds of organic and organosilicon insulation follows only one law, which can be expressed by the empirical formula (1). In the papers cited by references 2, 3, 8 it is shown that if formula (1) is satisfied, the process of thermal aging proceeds according to the law of monomolecular reaction, the rate constant of which may be determined from formula (2). The activation energy can be determined from formula (3). The results of the first experiments for the determination of the service life of insulation substances were found to differ greatly with different authors. At the Vsesoyuznyy elektrotekhnicheskii institut im. Lenina (All-Union Institute of Electrical Engineering imeni Lenin) experiments were conducted for the determination of the service life of insulation

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Service Life of the Insulation of Electrical
Machines Under Thermal Aging

SOV/105-59-6-15/28

substances under real operational conditions. These experiments were supervised by V. I. Kalitvyanskiy (Refs 2, 3). In table 2 the values of the constants A and B from formula (1) are given, which have been computed by the author from the information collected from other papers (Refs 2, 3, 5, 6, 7, 8, 9, 10, 11, 12) and the activation energy Q under thermal aging of dielectric substances and insulation materials of electrical machines is presented. At present many experimental data confirm the validity of formula (1) also for the determination of the dielectric strength of various insulation materials. The experimental data on the dynamic service life of vulcanized rubber and of synthetic fibres also correspond to formula (1) (Ref 16). The empirical formulas obtained from American data (Refs 4, 17) for the calculation of the service life of an insulation in years is presented. In spite of the great amount of information available, the problem of the service life of insulations cannot be regarded as conclusively solved.

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Service Life of the Insulation of Electrical
Machines Under Thermal Aging

SOV/105-59-6-15/28

The empirical formulas obtained can only be used for estimative
calculations. There are 2 tables and 17 references, 6 of which
are Soviet.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of
Power Engineering)

SUBMITTED: November 25, 1958

Card 3/3

S/196/63/000/001/015/035
E194/E155

AUTHOR: Mantrov, M. I.

TITLE: Calculation of the thermal stability and breakdown voltage of high-voltage cable

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.1, 1963, 34, abstract 1 B 116. (Tr. Mosk. energ. in-ta, no.39, 1962, 341-356)

TEXT: The thermal stability and electro-thermal breakdown of high-voltage cable are treated mathematically on the assumption that the conductivity varies exponentially with temperature. Formulae are derived to calculate the thermal stability of 420-kV buried cable with a copper core of 500 mm² section and impregnated paper insulation 28 mm thick. 3 figures. 3 references.

[Abstractor's note: Complete translation.]

Card 1/1

MANTROV, M.I., kand. tekhn. nauk, dotsent

Calculation of thermal stability and drive voltage of a
high-voltage cable. Trudy MEI no.39:341-356 '62.

(MIRA 17:6)

MANTROV, M.I., dots. BOROMILIN, V.N., assistant, red.

[Calculation of the insulation of electrical machines;
abstract of a course in "Calculation and design of
electrical insulation"] Raschet izoliatsii elektriche-
skikh mashin; konspekt po kursu "Raschet i konstruiro-
vanie elektricheskoi izoliatsii. Moskva, Energ. in-t,
1964. 110 p. (MIRA 12.1)

MANTROV, V M

24(3) p. 4

PHASE I BOOK EXPLOITATION

SOV/1341

Vsesoyuznyy elektrotekhnicheskiy institut

Issledovaniya v oblasti elektricheskogo razryada v gazakh (Research in the Field of Electric Discharge in Gases) Moscow, Gosenergoizdat, 1958. 239 p. (Series: Its: Trudy, vyp. 63) 2,570 copies printed.

Ed. (Title page): Klyarfel'd, B.N., Professor; Ed. (Inside book): Antik, I.V.; Tech. Ed.: Borunov, N.I.; Editorial Board of Series: Andrianov, K.A., Biryukov, V.G. (Chief Ed.), Butkevich, Yu.V. (Deputy Chief Ed.), Granovskiy, V.L., Kalitvyanskiy, V.M., Klyarfel'd, B.N., Krapivin, V.K., Timofeyev, P.V., Pastovskiy, V.G., Tseyrov, Ye.M. and Shemayev, A.M.

PURPOSE: This collection of articles, issued by the Vsesoyuznyy Ordena Lenina Elektrotekhnicheskiy Institut imeni V.I. Lenina (All-Union Order of Lenin Electrical Engineering Institute imeni V.I. Lenin), is intended for scientists and specialists in gas discharge techniques.

Card 1/5

Research in the Field of Electric (Cont.)

SOV/1341

COVERAGE: This collection comprises research papers on problems of applied physics of electric discharge in gases. The papers cover the following subjects: formation of an electric discharge when high voltages are applied to the electrodes of gas-discharge tubes, the behavior and properties of the cathode spot forming on the mercury surface, methods of investigating gas density during passage of large currents through the discharge tubes and the density distribution of current on the plate surface of mercury rectifiers. The articles can be divided basically into three groups according to the following subjects: 1. Formation of initial states of self-discharge. This subject is discussed in the 1st and 2nd articles, in which discharge firing is investigated in uniform and nonuniform fields at low gas pressure and at high voltages, in the 3rd article on the spread of plasma beyond the limits of the discharge space, and in the 4th article on the transition of a negatively charged electrode from sonde to cathode conditions. 2. Formation of arc discharge on a metal surface, in particular, on a mercury surface. This subject is discussed in the 5th article on secondary breakdowns of

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Research in the Field of Electric (Cont.)

SOV/1341

various gases at atmospheric pressure, in the 6th article on the extinction and re-excitation of the cathode spot on the mercury surface, in the 7th, 8th and 9th papers on the properties and behavior of mercury droplets, and in the 12th article on current density distribution on the plate surface. 3. Development of methods of measuring the dynamics of gas density in the discharge space. This subject is covered in articles 10 and 11. Articles 1, 2, 5, 7, 8, 9, 10 and 11 represent parts of candidate dissertations of the respective authors. All papers were written under the supervision of Professor B.N. Klyarfel'd.

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Research in the Field of Electric (Cont.)	SOV/1341
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AVAILABLE: Library of Congress

JP/atr
4-13-59

Card 5/5

MANTROY, Y.M.

Quenching of the excitation arc in mercury-arc rectifiers at
high dropping rates of the discharge current. Trudy VNI no.63:
88-106 '58. (MIRA 11:11)
(Mercury-arc rectifiers)

RUBCHINSKIY, A.V.; KOBELEV, F.S.; MANTROV, V.M.

Methods for measuring mercury vapor density. Trudy VFI no.63:
170-191 '58. (MIRA 11:11)
(Mercury--Density)

SOV/110-59-1-6/28

AUTHOR: Mantrov, V.M. (Engineer)

TITLE: Increasing the Stability of the Excitation Arc of a Single-Anode Mercury Valve (Povysheniye ustoychivosti dugi vozbuzhdeniya odnoanodnogo rtutnogo ventilya)

PERIODICAL: Vestnik Elektropromyshlennosti, 1959, Nr 1, pp 17-23 (USSR)

ABSTRACT: Single-anode mercury valves are becoming widely used but troubles are sometimes experienced because the excitation arc is extinguished. This article considers the causes of extinction and also indicates methods of increasing the stability of the excitation arc. The causes of extinction are classified as either accidental or systematic, and are briefly considered. However, even when accidental causes are excluded, operating experience shows that extinction often occurs under rated operating conditions. Tests have shown that the main causes in single-anode valves are interruption of the main current through the valve and application to its anode of a high inverse voltage. The mechanism of excitation arc extinction is then discussed with reference to Fig 1. The currents that result from resonant space-charges when the main discharge current ceases to flow are considered. It is shown that under certain circumstances the electronic current in the anode

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Increasing the Stability of the Excitation Arc of a Single-Anode Mercury Valve

circuit from the cathode spot decreases because of space charges received from the remanent arc. These charges increase the current in the excitation circuit and also increase the voltage drop on the limiting impedance. Hence the voltage between the excitation anode and the cathode drops to zero, after which a part of the back electronic de-ionisation current passes through the valve cathode. As soon as this voltage becomes less than the cathode drop and electronic current from the cathode ceases, the cathode spot is extinguished. Oscillograms of the voltage on the excitation anode and the excitation arc current taken during extinction of the excitation arc are given in Fig 2; the results confirm the preceding analysis. The stability of the excitation arc increases with the increase of current in it, and decreases with increase in the ionic currents. The latter are proportional to the concentration of remanent charges. The cathode spot of the excitation arc may again be ignited some tens of microseconds after extinction. The oscillogram in Fig 2b shows that at this instant the voltage on the

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excitation anode drops rapidly to the excitation arc voltage and the current in the circuit rises to its previous value. This self-ignition of the cathode spot is similar in physical nature to the self-ignition of an ignitron without a grid. Thus the probability of excitation arc extinction depends upon the probability of extinction and of self re-ignition of the cathode spot. The stability of the excitation arc can be increased either by preventing extinction of the cathode spot or by providing conditions for its reliable self re-ignition. The chances of re-ignition can be improved by increasing the excitation arc current and the supply voltage, but this is not advantageous. Putting various semi-conductors and insulating materials in the mercury cathode promotes re-ignition but the results are very unstable. The most stable result is obtained by introducing inductance into the excitation arc circuit. Increase in inductance of the anode excitation reactors is particularly beneficial; the reasons for this are briefly explained. When the excitation arc is supplied by a.c. any electrical leakage

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or contact between the excitation anode and its screen causes frequent extinctions. These are not accompanied by back-fires in the excitation circuit. Extinction of the excitation stops if the excitation and main currents are so phased that during commutation of the valve the excitation anode connected to the screen is burning. In this case during commutation of the valve, when the probability of extinction of the excitation arc is greatest, the electronic current flows through the screen, the excitation arc circuit is not shunted and it is no longer extinguished. A similar result can be obtained by supplying the excitation arc with direct current. Another way of increasing the stability of the excitation arc would be to increase the current in it at the moment of commutation of the valve. A method of doing this was suggested by S.B. Yuditskiy, using the circuit shown in Fig 3. It has been found in tests that this circuit suffers from a number of defects, the nature of which is explained. The author has developed another circuit, illustrated in Fig 4, to overcome these defects. In the simplest circuit of a three-phase rectifier with neutral, a three-phase

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transformer with air gap is used in place of three separate transformers. The best result is obtained when the secondary windings of the transformer are connected in zigzag, as shown in Fig 5. The way in which the excitation is increased at the moment of commutation is explained. This method of excitation-forcing was tested under laboratory conditions in a valve with a fixed cathode spot and a mean current of 25 A and a maximum inverse voltage of 2 kV. In this valve the excitation arc burns stably without loading, up to currents of 2 - 3 A, but under load the excitation is frequently extinguished. Oscillograms taken during comparative tests of different excitation-forcing circuits are given in Fig 6. The results show that the circuit of Fig 5 is the best. The use of excitation-forcing is recommended for installations in which the rate of diminution of the discharge current is very great. However, the method entails extensive reconstruction of the circuit and

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increases the power consumption of the valve. Hence in particular cases it is sufficient to increase the inductance of the anode reactors of the excitation arc circuit.

There are 6 figures and 6 references, 5 of which are Soviet and 1 English.

SUBMITTED: September 3, 1958

Card 6/6

66697

24,2120

SOV/109-4-8-17/35

AUTHORS: Rubchinskiy, A.V., Kobelev, F.S. and Mantrov, V.M.

TITLE: Application of the Oscillations on a Small Anode to the Measurement of Gas or Vapour Density

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 8, pp 1311 - 1315 (USSR)

ABSTRACT: The method is based on the correlation existing between the amplitude of the oscillations appearing in a low-pressure discharge on a small anode and the density of the gas or vapour in the discharge (Ref 1). The density is measured by introducing a small anode into a discharge. This is usually in the form of a molybdenum or tungsten wire having a diameter ranging from 0.01 to 2 mm and a length of several mm. The source of electrons necessary for the maintenance of the discharge is a small auxiliary arc or a heated cathode. A positive voltage is applied to the anode through a suitable limiting resistance. When the current density at the small anode is greater than 0.05 to 0.1 A/cm², the voltage at the anode (with respect to the cathode) has a form of high-frequency oscillations

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having an amplitude of a few tens or hundreds of volts and a frequency in the range of 10^4 to 10^6 c.p.s. (Figure 1). It is possible to construct suitable calibration curves for the measurement method. These should show the dependence of the oscillation amplitude at the anode on the gas or vapour density. For mercury, the curves can be taken by measuring the oscillation amplitude by an oscillograph at various temperatures of the cooling water which defines the pressure of the saturated vapour. Typical calibration curves $A = f(p)$ for three different values of discharge current are shown in Figure 2. The supply source to the tube should be chosen suitably; when the amplitudes of the oscillations are of the order of 300 to 400 V, the supply voltage must be about 800 to 1 000 V. Calibration curves $A = f(p)$ for mercury vapour with the anodes of different diameters are shown in Figure 3. The accuracy of the calibration curves is limited by the accuracy in the measurement of the amplitude and the temperature of the cooling water. It is thought that

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of Gas or Vapour Density

the error in the measurement does not exceed 10%. The small-anode oscillations appear not only in mercury but in hydrogen, rare gases and various other gases. In all cases, the amplitude of the oscillations decreases as the gas pressure is increased. This can be seen from Figure 5, which shows the amplitude of the oscillations for Xe, Kr, Ar, Ne and H₂; the anode in this case had a diameter of 0.2 mm and a length of 3 mm. The discharge was operated by means of a d.c. source and the electrons were provided by means of a heated tungsten cathode. There are 5 figures, 1 table and 2 references, 1 of which is Soviet and 1 German.

SUBMITTED: March 5, 1959

4

Card 3/3

MANTROV, V.M., inzh.

Improved circuit for arc excitation of mercury-arc
rectifiers. Elektrichestvo no.5:13-15 My '60.

(MIRA 13:9)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina.
(Mercury-arc rectifiers)

MANTROV, V.M.

Disintegration time of the cathode spot on mercury. Zhmr. tekhn.
fiz. 30 no.6:672-673 Je '60. (MIRA 13:8)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. V.I.Lenina.
(Cathodes)

MANTROVA, E.Z.

USSR / Cultivated Plants. Ornamental

L-9

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69490

Author : Mantrova, E.Z.

Title : Characteristics of Gladioli Nutrition.

Orig Pub : Byul. Gl. botan. sada AN SSSR, 1956, No 24, 64-70

Abstract : Based on experiments conducted in vegetative vessels in the Botanical gardens of Moscow State University, the author established that gladioli are most responsive to nitrogenous fertilizers specially added as a nutrient during development of the second and fifth leaves; the effect of nitrogenous fertilizers is enhanced by simultaneous addition of potassium fertilizers; a complete mineral fertilization during the first stages of gladioli development depresses the plants; only beginning with the formation of the 5th leaf and down to the end of vegetation does the reaction of the plants to the effect of NKP become positive, and it increases during the vegetative period.

Card 1/1

MANTROVA, G. V., Cand Biol Sci -- (diss) "Biosynthesis of vitamin B₁₂ and porphyrins by means of propionic acid bacteria." Moscow, 1960. 21 pp with graphs; (Inst of Microbiology of the Academy of Sciences USSR, Inst of Biochemistry im A. N. Bakh of the Academy of Sciences USSR); number of copies not given; price not given; (KL, 17-60, 147)

MANTROVA, G. V., ETKIN, V. N., and POHELKINA, V. V. (USSR)

"Biosynthesis of Vitamin B12 and Porphyrins in Propionic Acid
Bacteria."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

BUKIN, V.N.; MANTROVA, G.V.

Biosynthesis of vitamin B₁₂ and prophyryns by propionic acid
bacteria. Vit. res. i ikh isp. no.5:32-49 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Moskva.
(CYANOCOBALAMINE) (PORPHYRIN AND PORPHYRIN COMPOUNDS)

BUKIN, V.N.; MANTROVA, G.V.

Effect of pyridoxine antagonists on the biosynthesis of vitamin B₁₂
and porphyrins by propionic acid bacteria. Dokl. AN SSSR 137 no. 3¹²
713-714, Mr '61. (MIRA 14:2)

1. Institut biokhimi im. A.N. Bakha AN SSSR. Predstavleno akademikom
A.I. Oparinym.
(PYRIDOXINE) (CYANOCOBALAMINE)
(PORPHYRIN AND PORPHYRIN COMPOUNDS)

BYKHOVSKIY, V.Ya.; ZAYTSEVA, N.I.; MANTROVA, G.V.

Use of δ -aminolevulinic acid for vitamin B₁₂ biosynthesis
by resting cells of *Propionibacterium shermanii*. Dokl. AN
SSSR 157 no.3:692-695 J1 '64. (MIRA 17:7)

1. Institut biokhimi imeni A.M. Bakha AN SSSR. Predstavleno
akademikom A.I. Oparinyam.

MANTROVA, K. P.

Mantrova, K. P. "The value of natural antihemolysin in hyper-immunization of horses by the B. Perfringens antigen," Sbornik nauch. trudov (Irkut. in-t epidemiologii i mikrobiologii), Issue 4, 1948, p. 58-64 - Bibliog: 7 items

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statel, No. 3, 1949)

IVANOVA, Ye.I.; MANTROVA, K.P.; POZDNOVA, Ye.N.; SORINA, L.I.

Causes of the development of pyrogens in the purification
and concentration of antitoxic serums. Trudy Irk. NIEM no.
6:90-97 '61. (MIRA 17:7)

1. Iz laboratorii kontsentratsii syvorotki Irkutskogo
nauchno-issledovatel'skogo instituta epidemiologii i
mikrobiologii.

MANTROVA, V. M.

7 Synthesis of polymethylmethoxysiloxanes. K. S. Andri-
anov and V. M. Mantrova (Acad. Sci. USSR, Moscow).
Zhur. Obshch. Khim. 37, 1242-3 (1967). Yielding 45-8%
Me₂Si(OH)₂, 7.5 g. Me₂SiCl₂, and 0.25 g. FeCl₃·6H₂O to
140° until the Cl content of the mixt. dropped to 3-4% gave
85-88% viscous polymer. Anhyd. catalyst gave 93-94%
polymer, but the hexahydrate gave the most rapid reaction.
Hydrolysis of the product and fractionation of the polymer
showed that 50% of the polymer has mol. wt. 800-1100.
The mol. wt. distribution varied with the detailed conditions
of the condensation. The formation of the polysiloxanes is
discussed in light of probable intermediate formation of ap-
propriate silanols produced by hydrolytic action of H₂O from
the hydrated catalyst. G. M. Kozlovskii

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S/112/59/000/012/015/097
AO52/A001

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 12, pp 13-14,
24013

AUTHOR: Mantrova, V.M.

TITLE: Production of Resilient-Elastic Vitreous Varnish Fabric for Insulation of Electrical Machines

PERIODICAL: Tr. Vses. elektrotekhn. in-ta, 1958, No. 62, pp. 123-171

TEXT: A study of ways and means of production of heat-resistant vitreous varnish fabric with high electro-insulating and mechanical properties suitable for substituting mica materials (mica tape) has been carried out in two directions:
1) production of impregnating varnishes on the base of elastic resins, synthesized by the method of heterofunctional condensation; 2) development of a rubber vitreous fabric with an increased electric strength on the base of vitreous fabric and polyorganosiloxane rubber. Conditions of heterofunctional condensation of dimethyl diethoxysilane with dimethyl dichlorosilane and methyltrichlorosilane in presence of ferric chloride as a catalyst have been studied. At condensation of these monomers polymethyl dimethylsiloxanes are formed. The mechanism of the condensation.
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86104

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A052/A001

Production of Resilient-Elastic Vitreous Varnish Fabric for Insulation of Electrical Machines

tion reaction is proposed. Combination of polymethyl siloxane rubber and polymethyl dimethyl siloxane resin has been studied; when combined, the polymers form a physical mixture. As a basis for impregnating varnishes for vitreous fabrics (KT (SKT) polydimethyl siloxane rubber and K-43 (K-43) polyorganosiloxane compound can be used. The technological process of production of rubber vitreous fabric has been developed; this fabric has high electro-insulating and physico-mechanical properties, maintained at a continuous thermal aging. The production of rubber vitreous fabric has been successfully organized at the "Elektroizolit" plant. The possibility of using rubber vitreous fabric for insulation of electrical machines as a substitute of mica tape has been established. There are 27 references. See also Ref. 24012 (on the possibility of a wide application of vitreous Escapon varnish fabric)

A.O.M.

Translator's note: This is the full translation of the original Russian abstract

Card 2/2

MANTROVA, Ye. Z.

Cand Biolog Sci

Dissertation: "Nourishment of the Potato Plant in the Areas of High Yield."
24/11/50

Moscow Order of Lenin State U. imeni M. V. Lomonosov

SO Vecheryaya Moskva
Sum 71

MANTROVA, Ye.Z.

Characteristics of gladiolus nutrition. Biul. Glav. bot
sada no.24:64-70 '56. (MLRA 9:11)

1. Botanicheskiy sad Moskovskogo gosudarstvennogo universiteta
imeni M.V. Lomonosova.
(Gladiolus) (Fertilizers and manures)

MANTROJA Ye Z

USSR/Cultivated Plants - Ornamental.

11-11

Abs Jour : Ref Zhur - Biol., No 2, 1958, 39564

Author : Mantrova, Ye.Z.

Inst : Botanical Garden of the Moscow State University.

Title : The Influence of Fertilizers on the Growth and Development of Philox.

Orig Pub : Sov. i. Zhurn., 1957, No 5, 55.

Abstract : The influence of N, P and K on the growth development and blossoming of philox was studied for 3 years at the Botanical garden of the Moscow State University. They were planted by stalks in open ground and in vegetative vessels. The best results were obtained with nitrogen fertilizers, especially during the first period of blossoming. P and K without N did not show any appreciable influence on the development of the plant. The action of N was reinforced.

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USSR/Cultivated plants - Ornamental.

M-11

Abs Jour : Bot Zhur - Biol., No 3, 1954, 32564

by a subsequent application of 1 or NPK before budding.
Blossoming improved and the resistance of plants
to frost and diseases. -- I.V. Braytsova.

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- 177 -

MANTROVA, Yelizaveta Zakharovna; BAZILEVSKAYA, N.A., red.; OTOCHEVA,
M.A., red.izd-va; LELYUKHIN, A.A., tekhn.red.

[Phlox; their cultivation and nutritional characteristics]
Floksy; kul'tura i osobennosti pitaniia. Moskva, Izd-vo M-va
kommun.khoz.RSFSR, 1959. 57 p. (MIRA 13:10)
(Phlox)

MANTROVA, Ye.Z.; ZDASYUK, V.I.

Fertilizing gladioli. Biol.Glav.bot.sada no.32:46-49 '58.

(MIRA 12:5)

1. Botanicheskiy sad Moskovskogo gosudarstvennogo universiteta
im. M.V.Lomonosova.

(Gladiolus--Fertilizers and manures)

MANTROVA, Ye.Z.; ZDASYUK, V.I.

Changes in the carbohydrate and protein metabolism of tulip and narcissus bulb due to the action of fertilizers. Nauch. dokl. vys. shkoly; biol. nauki no.1:123-128 '60. (MIRA 13:2)

1.Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

(Bulbs) (Plants, Ornamental--Fertilizers and manures)
(Plants--Metabolism)

MANTROVA, Ye.Z.

Changes in the carbohydrate and protein metabolism of *gladiolus* corms during storage. Nauch. dokl. vys. shkoly; biol. nauki no. 1:159-162 '61. (MIRA 14:2)

1. Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(GLADIOLUS) (BULBS—STORAGE) (PLANTS—METABOLISM)

MANTROVA, Ye.Z.

Nitrogen consumption by annual ornamental plants as related to the conditions of nutrition. Nauch. dokl. vys. shkoly; biol. nauki
noi4:147-151 '61. (MIRA 14:11)

1. Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

(ANNUALS (PLANTS)--FERTILIZERS AND MANURES) (NITROGEN)

MANTROVA, Ye.Z.

Requirement of nutritive substances by decorative plants during individual phases of their growth. Nauch.dokl.vys.shkoly; biol. nauki no.2:148-153 '63. (MIRA 16:4)

1. Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(PLANTS, ORNAMENTAL--FERTILIZERS AND MANURES)

MANTROVA, Ye.Z.

Fertilizing rates for individual decorative plants. Nauch. dokl.
vys. shkoly; biol. nauki no.1:156-160 '64. (MIRA 17:4)

1. Rekomendovana Botanicheskim sadom Moskovskogo gosudarstvennogo
universiteta im. M.V.Lomonosova.

MANTROVA, Yelizaveta Zakharovna; ZVYAGINTSEV, D.G., red.

[Fertilizers for ornamental plants] Udobrenie dekorativnykh rastenii. Moskva, Izd-vo Mosk. univ., 1965.
300 p. (MIRA 18:8)

ACC NR: AP6030133

(N)

SOURCE CODE: UR/0120/66/000/004/0071/0078

AUTHORS: Zelenov, B. A.; Lebedeva, L. K.; Mantsa, Y.; Moroz, N. S.

ORG: Joint Institute for Nuclear Research, Dubna (Ob'yedinonnyy institut yadernykh issledovaniy)

TITLE: A multichannel high-speed device using semiconductors for physics experiments on the 10 GeV synchrophasotron

SOURCE: Priory i tekhnika eksperimenta, no. 4, 1966, 71-78

TOPIC TAGS: physics research facility, semiconductor device, synchrophasotron, cable, oscillograph, diode, photomultiplier, particle scatter, transistor, synchrotron, particle detector, scintillation counter, gas filled counter, Cerenkov counter, / OIYaI synchrophasotron, FEU 36 photomultiplier, RK 19 cable, RK 2 cable, ENO 1 oscillograph, P418Ye diffusion transistor, D602A diode, LVE synchrophasotron

ABSTRACT: A multichannel high-speed device has been developed for use in conjunction with a 10 GeV OIYaI synchrophasotron to conduct physical experiments on large angle scattering of high energy particles. The multiplier included in the device provides flexibility enabling 17 counters to be operated and easily switched. This device coordinates the scintillation counters and gas-filled Cerenkov counters (which, with an FEU-36 photomultiplier, can record a single electron expelled from a photocathode) and gives a high-speed response in the nanosecond range for handling count rates of

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UDC: 539.1.075

ACC NR: AP6030133

10^6 per sec, while providing high stability in counting the low intensity count rates of scattered particles (up to 1 particle per hr). Six coincidence circuits and three anticoincidence circuits are combined to provide 100% recording effectiveness while eliminating instability and insuring the recording of the true events. The device uses P418Ye high frequency diffusion transistors, germanium tunnel diodes, D602A high frequency diodes, and RK-2 and RK-19 cables to give time integration of the circuit and pulse shaping. The system is synchronized by a control system which employs an ENO-1 oscillograph. It is unitized and held on two racks. A one-year test on the LVE synchrophasotron with 3.17 GeV/sec pi mesons showed that the secondary coincidence circuit and the monitor gave the same count over a wide threshold range. The resolution time of the coincidence circuits is < 10 nanosec, and the anticoincidence circuit provides a suppression effectiveness of 100% when used with a threshold counter. Orig. art. has: 10 figures.

SUB CODE: 09, 20/ SUBM DATE: 26May65/ ORIG REF: 002/ OTH REF: 24

Card 2/2

MANTSAROV, V.

"Zealous Annihilator of Wolves." p. 191, Sofiya, Vol. 10, no. 4, Apr. 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

MANTSEV, B.M.

VOLODIN, Ye.I., kandidat tekhnicheskikh nauk; GORODETSKIY, I.Ye., professor, doktor tekhnicheskikh nauk [deceased]; DOSCHATOV, V.V., inzhener; KOROTKOV, V.P., kandidat tekhnicheskikh nauk; MANTSEV, B.M., inzhener; NESTEROVSKIY, M.M., inzhener; PALEY, M.A., inzhener; ROSTOVYKH, A.Ya., kandidat tekhnicheskikh nauk; TAYTS, B.A., professor, doktor tekhnicheskikh nauk; RYDINOV, V.Ya., kandidat tekhnicheskikh nauk; ERVAYS, A.V., inzhener; CHUDOV, V.A., inzhener; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, glavnyy redaktor; VLADISLAVLEV, V.S., redaktor; MALOV, A.N., redaktor; POZDNYAKOV, S.N., redaktor; STOLBIN, G.B., redaktor; CHERNAVSKIY, S.A., kandidat tekhnicheskikh nauk, redaktor; MARKUS, M.Ye., inzhener, redaktor [deceased]; KARGANOV, V.G., inzhener, redaktor graficheskikh rabot; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Metal worker's manual; in five volumes] Spravochnik metallista; v piati tomakh. Red. sovet N.S.Acherkan i dr. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry. Vol.1.(Pod red.S.A.Chernavskogo).1957.603 p.
(Mechanical engineering)

S/130/60/000/006/003/011

AUTHOR: Mantsev, R. M., Director

TITLE: Outlooks in the "Stal'proyekt" Work

PERIODICAL: Metallurg, 1960,⁵ No. 6, pp. 4-6

TEXT: In the near future Stal'proyekt will direct its work on a number of serious problems connected with the improvement of designs of the following units: 1) Steelmelting units. Steelmelting furnaces of 800-900-ton capacity are being designed. The installation of a standard converter shop producing 1.6-2.0 million tons of steel annually with 75 to 100-ton converters with top oxygen blast will be accomplished in 1960. Subsequently the design of 200-250-ton converters will be developed. 2) Continuous steel casting installations. Within 10-15 years continuous steel casting units will be built in plants in which steel is presently cast into casting pits. The operation of the existing casting units is studied, including an installation at the Novo-Lipetskiy Plant for casting slabs of 150 x 600 to 170 x 1,000 mm cross section from a 90-ton ladle. The design of multi-groove installations for casting square ingots of 120-160 mm from 90-ton ladles and for heavy ingots of 250 x 250 to 350 x 350 and 250 x 500 mm from 270 ton ladles is being developed.

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Outlooks in the "Stal'proyekt" Work

S/130/60/000/006/003/011

3) Heating furnaces for the rolling process. Stal'proyekt is planning the installation of heating pits for high-efficiency blooming and slab mills with shafts heated by a single top burner. Experimental electric heating pits near the roughing mills will serve to reduce metal loss by a factor of about 10. Experimental work on this subject will be followed by the design of industrial units. Five and six-zone continuous high-efficiency furnaces are being devised for sheet and rail- and structural-steel mills and heating installations for light-section and strip mills of 250-300 t/hr capacity. In the near future furnaces will be developed for non-oxidizing heating of metal prior to rolling. 4) Thermal furnaces. The main trend in the development of thermal furnaces is the design of continuous units for high-speed non-oxidizing thermal treatment of sheets. Within the current year Stal'proyekt will devise tower furnaces of continuous units for heat treating transformer steel by the new technology; a great number of cupola furnaces with compulsory circulation of shielding gas under a muffle, and units for heat treating reinforcing steel. It is planned to develop the following units within the coming years: a tower furnace for continuous bright heat treatment of tin; a tower furnace for high-speed bright continuous heat treatment of tin with open flame; a unit for the super-high-speed bright continuous heat treatment of tin with heating and cooling of the strip in molten sodium;

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Outlooks in the "Stal'proyekt" Work

S/130/60/000/006/003/011

a furnace for a continuous hot zincplating unit. Furthermore, experimental investigations are concentrated on the use of natural gas for firing metallurgical furnaces. Research, with the use of computers is also conducted on the comprehensive mechanization and automation of steel-melting and rolling processes and sections of heating pits and tin heat treatment. A system of fully automated control in the production of shielding atmosphere is being developed.

ASSOCIATION: Stal'proyekt

Card 3/3

AKSEL'RUD, L.G.; GLINKOV, M.A.; GRIGORI'YEV, V.N.; LIFSHTS, A.Ye.; MANTSEV, R.M.

Prospects for improvements in the design of heating and heat-treating
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(Furnaces, Heating) (Furnaces, Heat-treating)

MANTSEV, R.M.; GUBERT, S.V.; CHARIKHOV, L.A.; VOSKOBOYNIKOV, V.G.; STOSHA,
Ye.A.

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1. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu agregatov staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii (for Mantsev). 2. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu metallurgicheskikh zavodov (for Gubert). 3. Glavnyy inzh. TSentral'noy laboratorii avtomatiki (for Charikhov). 4. Zamestitel' direktora Instituta novoy metallurgicheskoy tekhniki TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I.P. Bardina (for Voskoboynikov) 5. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo i projektnokonstruktorskogo instituta metallurgicheskogo mashinostroyeniya (for Stosha).

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Forty years of work of the "Stal' projekt" institute. Stal' 24 no.6:
488-491 Je '64. (MIRA 17:9)

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agregatov stalelitoynogo i prokatnogo proizvodstva dlya chernoy
metallurgii (Stal'projekt).

LUK'YANOV, V.L., deputat Verkhovnogo Soveta SSSR, master bloka martenovskikh pechey; GOLIKOV, I.N.; BUY, B.I.; LEPORSKIY, V.V.; SOPOV, T., Geroy Sotsialisticheskogo Truda, val'tsovshchik; MANTSEV, R.M.; CHERNOV, V.D., stalevar

We are carrying out the decisions of the 22d Congress of the Communist Party of the Soviet Union. Metallurg 7 no.7:2-6
Jl '62. (MIRA 15:7)

1. Nichne-Tagil'skiy metallurgicheskiy kombinat (for Luk'yanov).
 2. Direktor Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii (for Golikov).
 3. Sekretar' partiynogo komiteta Makeyevskogo metallurgicheskogo zavoda (for Buy).
 4. Direktor zavoda "Azovstal'" (for Leporskiy).
 5. Magnitogorskiy metallurgicheskiy kombinat (for Sopov).
 6. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu agregatov staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii (for Mantsev).
 7. Chelyabinskiy metallurgicheskiy zavod (for Chernov).
- (Metallurgy)

MANTSEV, R.M.

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MANTSEV, V.G.

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(Postal service)

MANTSEV, V.N.

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skogo instituta svyazi.

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MANTSEV, V.S., inzh.; VUKOLOV, L.A., kand.tekhn.nauk; KOZLOV, Yu.P., inzh.;
YUKREL', N.G., inzh.

Improving the manufacturing technology of brake shoes made of composition
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(Railroads—Brakes)

KOPYLOV, Ye.P.; EPSHTEYN, V.G.; LAZARYANTS. E.G.; TSAYLINGOL'D, V.L.;
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Characteristics of the vulcanizates of methylvinylpyridine rubbers
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Pediatrics, Acad Med Sci USSR), 200 copies (KL, 45-57, 99)

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L 3443-66 EWP(m)/EWP(t)/EWP(z)/EWP(b) IJP(a) JD/HW/JG/QS

ACCESSION NR: AT5023107

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B71

AUTHOR: Nagibin, V. S.; Mantsevich, A. D.

44.55 44.55

TITLE: Determination of molybdenum in nickel-base alloys by the dichromate method

27 44.55, 27

SOURCE: Problemy bol'shoy metallurgii i fizicheskoy khimii novykh splavov (Problems of large-scale metallurgy and physical chemistry of new alloys); k 100-letiyu so dnya rozhdeniya akademika M. A. Pavlova. Moscow, Izd-vo Nauka, 1965, 320-323

TOPIC TAGS: molybdenum, volumetric analysis, oxidation, chromate

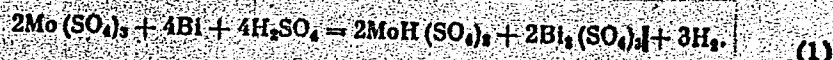
ABSTRACT: Since the conventional gravimetric and volumetric methods of the determination of Mo in Ni-base alloys are complicated and time-consuming and relatively unreliable, the author proposes and describes and experimentally verified method of such determination, the novelty of which lies in that it does not require the prior separation of Mo from Ni and Cr by a NaOH solution. Moreover, then the subsequent oxidation of Mo^{5+} to Mo^{6+} does not involve the use of solutions of

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ACCESSION NR: AT5023197

potassium permanganate or ammonium vanadate and instead is based on using a 0.1 N solution of $K_2Cr_2O_7$. The redox potential of the system $E_0 (Mo^{6+}/Mo^{5+}) = +50$ v, and hence the presence of Cr (Cr^{3+}) and Ni does not interfere with the determination of Mo. The obtained Mo^{6+} is reduced with metallic Bi -- this being the optimal reducing agent in such cases -- in sulfate solutions:



The setup for reducing Mo^{6+} is shown in Fig. 1 of the Enclosure. Reductor 1, filled with lumps of Bi metal, is attached to 500-700 cc conic flask 2 plugged with a rubber stopper with three holes. The tube of reductor 1 is inserted into one of these holes, while bent glass tube 3, reaching the bottom of the reaction flask, is inserted into another hole. The other, bent end of tube 3 is attached to a Kipp CO_2 generator filled with marble and HCl (1:3). The third hole in the rubber stopper remains open and serves as an outlet for the CO_2 escaping from the reaction flask. When cock 6 of the Kipp generator is open, CO_2 enters the reaction flask via two washing flasks 4, 5, filled with a 5% solution of $CuSO_4$ and H_2O . In order to oxidize M^{5+} , 20-25 cc of 0.1 N solution of $K_2Cr_2O_7$ and several drops of 0.2%

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